

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (original): A polishing composition, comprising (A) a compound having three or more azole moieties, (B) an oxidizing agent, and (C) one or more species selected from among an amino acid, an organic acid, and an inorganic acid.
2. (original): The polishing composition according to claim 1, wherein the compound having three or more azole moieties (A) is a polymer of an azole having a vinyl group.
3. (currently amended): The polishing composition according to claim 1 ~~or 2~~, wherein the compound having three or more azole moieties (A) is soluble in water.
4. (currently amended): The polishing composition according to claim 1 ~~any one of claims 1 to 3~~, wherein the compound having three or more azole moieties (A) has a mass average molecular mass in a range of 300 to 5,000,000.
5. (currently amended): The polishing composition according to claim 1 ~~any one of claims 1 to 4~~, wherein the content of the compound having three or more azole moieties (A) is in a range of 0.001 to 1 mass%.

6. (currently amended): The polishing composition according to claim 1 ~~any one of claims 1 to 5~~, wherein amino acid comprises at least one species selected from the group consisting of glycine, L-alanine, β -alanine, L-2-aminobutyric acid, L-norvaline, L-valine, L-leucine, L-norleucine, L-isoleucine, L-allo-isoleucine, L-phenylalanine, L-proline, sarcosine, L-ornithine, L-lysine, taurine, L-serine, L-threonine, L-allo-threonine, L-homoserine, L-tyrosine, 3,5-diiodo-L-tyrosine, β -(3,4-dihydroxyphenyl)-L-alanine, L-thyroxine, 4-hydroxy-L-proline, L-cysteine, L-methionine, L-ethionine, L-lanthionine, L-cystathionine, L-cystine, L-cysteic acid, L-aspartic acid, L-glutamic acid, S-(carboxymethyl)-L-cysteine, 4-aminobutyric acid, L-asparagine, L-glutamine, azaserine, L-arginine, L-canavanine, L-citrulline, δ -hydroxy-L-lysine, creatine, L-kynurenine, L-histidine, 1-methyl-L-histidine, 3-methyl-L-histidine, ergothioneine, and L-tryptophan.

7. (currently amended): The polishing composition as described in claim 1 ~~any one of claims 1 to 6~~, wherein the organic acid comprises at least one species selected from the group consisting of formic acid, acetic acid, propionic acid, butyric acid, valeric acid, 2-methylbutyric acid, n-hexanoic acid, 3,3-dimethylbutyric acid, 2-ethylbutyric acid, 4-methylpentanoic acid, n-heptanoic acid, 2-methylhexanoic acid, n-octanoic acid, 2-ethylhexanoic acid, benzoic acid, glycolic acid, salicylic acid, glyceric acid, oxalic acid, malonic acid, succinic acid, glutaric acid, adipic acid, pimelic acid, maleic acid, phthalic acid, malic acid, tartaric acid, citric acid, and lactic acid.

8. (currently amended): The polishing composition ~~according to claim 1~~any one of claims 1 to 7, wherein the inorganic acid is sulfuric acid, nitric acid, phosphoric acid, or a salt thereof.

9. (currently amended): The polishing composition ~~according to claim 1~~any one of claims 1 to 7, wherein the content of the one or more species selected from the group consisting of an amino acid, an organic acid and an inorganic acid (C) is in a range of 0.001 to 10 mass%.

10. (currently amended): The polishing composition ~~according to claim 1~~any one of claims 1 to 9, wherein the oxidizing agent comprises at least one species selected from the group consisting of oxygen, ozone, hydrogen peroxide, alkyl peroxides, peracids, permanganate salts, periodate salts, persulfate salts, polyoxo acids, and hypochlorite salts.

11. (currently amended): The polishing composition ~~according to claim 1~~any one of claims 1 to 10, wherein the content of the oxidizing agent (B) is in a range of 0.01 to 30 mass%.

12. (currently amended): The polishing composition according to ~~claim 1~~any one of claims 1 to 11, which further contains a surfactant.

13. (original): The polishing composition according to claim 12, wherein the surfactant comprises at least one species selected from the group consisting of anionic surfactants, cationic surfactants, nonionic surfactants, and ampholytic surfactants.

14. (currently amended): The polishing composition according to claim ~~12~~¹⁴, wherein the surfactant is at least one species selected from the group consisting of an alkylaromatic-sulfonic acid or a salt thereof, polyoxyethylene alkyl phosphoric acid or a salt thereof, alkyl phosphoric acid or a salt thereof, and a fatty acid or a salt thereof.

15. (currently amended): The polishing composition according to ~~claim 12~~^{claim 14} ~~any one of claims 1 to 14~~, wherein the content of the surfactant is in a range of 5 mass% or less.

16. (currently amended): The polishing composition ~~according to claim 1~~^{according to claim 14} ~~any one of claims 1 to 15~~, which further contains a protective-film-forming agent.

17. (original): The polishing composition ~~according to claim 16~~^{according to claim 16}, wherein the content of the protective-film-forming agent is in a range of 5 mass% or less.

18. (currently amended): The polishing composition according to claim ~~17~~¹⁷, wherein the protective-film-forming agent comprises at least one species selected from the group consisting

of benzotriazole, tolyltriazole, hydroxybenzotriazole, carboxybenzotriazole, benzimidazole, tetrazole, and quinaldinic acid.

19. (currently amended): The polishing composition according to claim 1~~claim 18 or 19~~, wherein the content of the protective-film-forming agent is in a range of 10 mass % or less.

20. (currently amended): The polishing composition according to claim 1~~any one of claims 1 to 19~~, which further contains an alkali substance.

21. (original): The polishing composition according to claim 20, wherein the alkali substance comprises at least one species selected from the group consisting of ammonia, amines, polyamines, alkali metal compounds, and alkaline earth metal compounds.

22. (original): The polishing composition according to claim 20, wherein the content of the alkali substance is in a range of 10 mass% or less.

23. (currently amended): The polishing composition according to claim 1~~any one of claims 1 to 22~~, which further comprises an abrasive.

24. (original): The polishing composition according to claim 23, wherein the abrasive comprises at least one species selected from the group consisting of silica, alumina, ceria, titania, and organic abrasive.

25. (original): The polishing composition according to claim 23, wherein the content of the abrasive is in a range of 30 mass% or less.

26. (currently amended): The polishing composition according to claim 1 ~~any one of claims 1 to 25~~, which has a pH of 5 to 11.

27. (currently amended): The polishing composition according to claim 1 ~~any one of claims 1 to 26~~, which is used for polishing a metal film provided on a substrate having trenches such that the metal film fills the trenches.

28. (currently amended): The polishing composition according to claim 1 ~~any one of claims 1 to 26~~, wherein a ratio (P_{RR}/B_{RR}), between a metal film polishing rate (P_{RR}) for polishing a metal film formed on a substrate having trenches such that the metal film fills the trenches, or polishing a metal film formed on a substrate having trenches and a barrier metal film formed on the substrate such that the metal film fills the trenches, and a metal film polishing rate (B_{RR}) for polishing a flat blanket metal film, is 3.5 or more.

29. (currently amended): A composition which forms the polishing composition as set forth in claim 5 ~~any one of claims 5, 9, 11, 15, 17, 19, 22 and 25~~ by dilution.

30. (currently amended): A kit comprising a plurality of compositions, which forms the polishing composition as set forth in claim 1 ~~any one of claims 1 to 28~~ by mixing or by mixing and dilution.

31. (currently amended): A polishing method comprising forming a metal film provided on the substrate having trenches such that the metal film fills the trenches, by use of the polishing composition as set forth in claim 1 ~~any one of claims 1 to 27~~.

32. (currently amended): A polishing method comprising forming a barrier metal film on a substrate having trenches, and polishing, by use of the polishing composition as recited in claim 1 ~~any one of claims 1 to 27~~, a metal film provided on the substrate such that the metal film fills the trenches.

33. (currently amended): A polishing method comprising a metal film, wherein a metal film formed on a substrate having trenches such that the metal film fills the trenches, or a metal film formed on a substrate having trenches and a barrier metal film formed on the substrate such that the metal film fills the trenches, has protrusions, and corners of the protrusions are preferentially polished by the composition as set forth in claim 1 ~~any one of claims 1 to 27~~.

34. (currently amended): The polishing method according to claim 33, wherein the metal film comprises copper, a copper-containing alloy, iron, or an iron-containing alloy.

35. (currently amended): The polishing method according to claim 33 ~~or 34~~, wherein the barrier metal film comprises tantalum-containing metal such as tantalum or tantalum nitride.

36. (currently amended): The method for polishing a substrate, the method comprising planarizing, by use of the polishing composition as recited in claim 1 ~~any one of claims 1 to 28~~, a metal film provided on a substrate having trenches such that the metal film fills the trenches.

37. (currently amended): The method for producing a substrate, the method comprising a step of polishing, through the polishing method as recited in claim 31 ~~any one of claims 31 to 36~~, a metal film provided on a substrate having trenches such that the metal film fills the trenches.

38. (original): A method for using the composition as set forth in claim 29 as a transportation or storage composition.

39. (original): A method for using the composition as set forth in claim 30 for transportation or storage compositions.

40. (new): The method for producing a substrate, the method comprising a step of polishing, through the polishing method as recited in claim 32, a metal film provided on a substrate having trenches such that the metal film fills the trenches.

41. (new): A method for using the composition as set forth in claim 37 as a transportation or storage composition.

42. (new): A method for using the composition as set forth in claim 38 for transportation or storage compositions.

43. (new): The method for producing a substrate, the method comprising a step of polishing, through the polishing method as recited in claim 33, a metal film provided on a substrate having trenches such that the metal film fills the trenches.

44. (new): A method for using the composition as set forth in claim 33 as a transportation or storage composition.

45. (new): A method for using the composition as set forth in claim 44 for transportation or storage compositions.